

17. A purified polypeptide comprising an amino acid sequence selected from the group consisting of:

- a) an amino acid sequence of SEQ ID NO:1,
- b) a naturally-occurring amino acid sequence having at least 90% sequence identity to the sequence of SEQ ID NO:1,
- c) a biologically-active fragment of the amino acid sequence of SEQ ID NO:1, wherein said biologically-active fragment is imported into the inner mitochondrial membrane, and
- d) an immunologically active fragment of the amino acid sequence of SEQ ID NO:1, wherein said immunologically active fragment comprises at least 10 contiguous amino acids of SEQ ID NO:1 and generates an antibody that specifically binds to the polypeptide encoded by SEQ ID NO:1.

18. An isolated polypeptide of claim 17, having a sequence of SEQ ID NO:1.

19. An isolated polynucleotide encoding a polypeptide of claim 17.

20. An isolated polynucleotide encoding a polypeptide of claim 18.

21. An isolated polynucleotide of claim 20, having a sequence of SEQ ID NO:2.

22. An expression vector comprising a promoter sequence operably linked to a polynucleotide of claim 19.

23. A host cell transformed with an expression vector of claim 22.

24. A method for producing a polypeptide of claim 17, the method comprising:

- a) culturing a host cell under conditions suitable for expression of the polypeptide, wherein said host cell is transformed with an expression vector, and said expression vector comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 17, and
- b) recovering the polypeptide so expressed.

25. A method of claim 24, wherein the polypeptide has the sequence of SEQ ID NO:1.

26. An isolated polynucleotide comprising a sequence selected from the group consisting of:

- a) a polynucleotide sequence of SEQ ID NO:2,
- b) a naturally-occurring polynucleotide sequence having at least 90% sequence identity to the sequence of SEQ ID NO:2,
- c) a polynucleotide sequence complementary to a),
- d) a polynucleotide sequence complementary to b) and
- e) a ribonucleotide equivalent of a)-d).

27. An isolated polynucleotide comprising at least 60 contiguous nucleic acids of claim 26.

28. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 26, the method comprising:

- a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and
- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

29. A method of claim 28, wherein the probe comprises at least 60 contiguous nucleotides.

30. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 26, the method comprising:

- a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
- b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

31. An isolated antibody which specifically binds to a polypeptide of claim 17.

32. A composition comprising a polypeptide of claim 17 and a pharmaceutically acceptable excipient.

33. A composition of claim 32, wherein the polypeptide has the sequence of SEQ ID NO:1.

34. A method for treating a disorder which is associated with decreased expression of the polypeptide of claim 17 comprising administering to a subject in need of such treatment an effective amount of the pharmaceutical composition comprising said polypeptide and a pharmaceutically acceptable excipient.

35. A purified agonist which specifically binds to and modulates the activity of the polypeptide of claim 17.

36. A purified antagonist which specifically binds to and inhibits the activity of the polypeptide of claim 17.

37. A pharmaceutical composition comprising the antagonist of claim 36 in conjunction with a suitable pharmaceutical carrier.

38. A method for treating a disorder which is associated with increased expression of the polypeptide of claim 17 comprising administering to a subject in need of such treatment an effective amount of the pharmaceutical composition comprising an antagonist which specifically binds to and inhibits the activity of said polypeptide.

39. A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 17, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 17 to a compound, and
- b) detecting agonist activity in the sample.

40. A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 17, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 17 to a compound, and
- b) detecting antagonist activity in the sample.

41. A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 20, the method comprising:

- a) exposing a sample comprising the target polynucleotide to a compound, and
- b) detecting altered expression of the target polynucleotide.

42. A method for identifying a specific antifungal agent, the method comprising:

- a) combining at least one agent with a fungal TIM17,
- b) identifying an agent which binds to the fungal TIM17,
- c) combining the agent with the human mitochondrial membrane protein of

claim 17, and

d) determining that the agent does not bind to the human mitochondrial membrane protein, thereby identifying the agent with antifungal specificity.

43. A method for identifying a specific antiprotozoal agent, the method comprising:

- a) combining at least one agent with a protozoal TIM17,
- b) identifying an agent which binds to the protozoal TIM17,
- c) combining said agent with the human mitochondrial membrane protein of claim 17, and
- d) determining that said agent does not bind to the human mitochondrial membrane protein, thereby identifying the agent with antiprotozoal specificity.